

Work Order ID 86334

86334

Page 1

June-27-12 1:29:09 PM

Item ID: D209-669-043

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 27/06/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12/06/27 Tooling:

Date:

Run Start ***NR1***

QC: Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2906	Rev B (DEO)								

100
100
DC
Document Control

DOCUMENT CONTROL
Memo
Photocopy D209-669 bluefile & type labels per PPP D205-669-043 Chg 003

0.00
0.00

110
110
Skidtubes
Skidtubes
Skidtubes

Skidtubes
Memo
- Inspect mat'l D2500-1-190 for damage
- Drill pilot holes using drill jig DT8149, DT8711-2 & DT8711-3 (Do not use cutting fluid)
- Open holes to 0.500" as per Dwg D2906 without cutting fluid
- Deburr and blow out all chips from
- Acid etch and Alodine tube per QSI 005 4.1

0.00
0.00

① SAD 12-06-27.

① HGG 12-6-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86334

June-27-12 1:29:09 PM

86.334

Page 2

Item ID: D209-669-043

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 27/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC3- Inspect Part Finish

0.00

120

QC

Memo

0.00

Quality Control

① SPO 12-02-04

130

0.00

130

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty Part Number Description Batch

A/R Sikaflex-291

Sikaflex expire date: 12-04-12

Start Time: 9h00 Date: 12-07-04

Fin Time: 1200 Date: 12-07-04

pick:

Qty

P/N

description

1

D2926-3

Web

B386446

① SPO 12-07-04

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86334

June-27-12 1:29:09 PM

86334

Page 3

Item ID: D209-669-043

Accept

N9000040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 27/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

140

CNC Bender

CNC Delta 100 Bender

BENDING MACHINE - CROSSTUBES

0.00

Memo

0.00

1-Bend as per program COB43FWD & COBRAFT on CNC Bender and Folio FT

2-Cut tubes as per Dwg. D2906

DC 12/07/05

150

150

Skidtubes

Skidtubes

Skidtubes

0.00

Memo

0.00

-Deburr ends and remove marks from bending

- Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x17G to start expansion and finish with 1/2 x 18G to achieve dwg dimention.

DC 12/07/09

160

160

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

1 0 DE 12/07/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86334

June-27-12 1:29:09 PM

86334

Page 4

Item ID: D209-669-043

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 27/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170		0.00							
170	Large Fab								
Skidtubes	Memo	0.00							
Skidtubes	-Drill holes for wearplates using DT8217 Open holes to 19/64", adjust stopper not to hit web. Debur								
	-Drill pilot holes for aft & fwd cap using DT8215 open holes to #6" Debur								
	-Drill pilot holes for Tow ring using DT9555 , open to .640" and Debur								
190	QC5- Inspect part completeness to step on W/O	0.00							
190									
QC	Memo	0.00							
Quality Control									

① SAD 6-07-09

8762109

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86334

June-27-12 1:29:09 PM

86334

Page 5

Item ID: D209-669-043

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 27/06/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Pressure Wash per QSI005 4.3	0.00							
200									
HandFinish	Memo	0.00							
Hand Finishing									
210	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
210									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 9:40 OVEN TEMPERATURE: 320°F FINISH TIME: 10:10								
220	QC3- Inspect Part Finish	0.00							
220									
QC	Memo	0.00							
Quality Control									

1 746 12-7-10

IX 12/6/10

1 12/07/10

W121841

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86334

June-27-12 1:29:09 PM

86334

Page 6

Item ID: D209-669-043

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Replacement Skidtube

Stop ***NS2***

Start Date: 27/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00							
230									
HandFinish	Memo	0.00							
Hand Finishing	1-Install inserts & wearplates as per Dwg. D2906. Use a drop of Sikaflex on insert holes before installing wearplates A/R Sikaflex-291 <u>121130</u> Sikaflex expire date: <u>14/03</u>								
	2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2906								
	3-Inspect for foreign object per QSI 024								
	4-Install D2855 Fwd & Aft Cap as per Dwg D2906 and seal Fwd & Aft Cap with Sikaflex. Clean excess adhesive A/R Sikaflex-291 <u>121130</u> Sikaflex expire date: <u>14/03</u>								
	5-Wing Walk as per Dwg D2906 and QSI 005 4.4 Batch: <u>122320</u>								

1 2 SP 12/07/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86334

June-27-12 1:29:09 PM

86334

Page 7

Item ID: D209-669-043

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 27/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

240

QC

Memo

0.00

8/7/12

Quality Control

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

250

Packaging

0.00

250

Packaging

Memo

0.00

Identify and pack for shipping as per PPPD209-669-043

Location:

PPP Rev:

PPP 849/6

C12/7/230

260

QC21- Final Inspection - Work Order Release

0.00

260

QC

Memo

0.00

Quality Control

MLJ 12/07/23

MLJ 12/07/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-27-12 1:29:14 PM

Page 1

Work Order ID: 86334

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

86334

D209-669-043

Start Date: 27/06/2012

Required Date: 11/07/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: new IPP 08.02.13 LL, verified by: DD
IPP Rev:B remove DT # in seq140 DD 10.03.10 Verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1		Manufactured	No				Each	224.0000		19			
D4202-1									**				
Spacer													
					B 87463							DC 12/07/09	
										19			
					<u>Location</u>					<u>Loc Qty</u>		<u>Loc Code</u>	
					LG					184			
					77727					5			
					83263					179			
					LG002					40			
					78806					6			
					79810					34			
D2500-1-190		Manufactured	No			110	Each	49.0000	1	1			
D2500-1-190									**				
Ext'n - 'I' Beam Tube 4"												SAD 12-06-27	
					<u>Location</u>					<u>Loc Qty</u>		<u>Loc Code</u>	
					HALL					49			
					74777					10			
					80061					39			
D2926-3		Manufactured	No			110	Each	12.0000	1	1			
D2926-3									**				
Web												SAD 12-02-04	
					<u>Location</u>					<u>Loc Qty</u>		<u>Loc Code</u>	
					LG					12			
					84949					6			
					84950					2			
					86263					4			

B 86446

①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-27-12 1:29:14 PM

Page 2

Work Order ID: 86334

86334

Parent Item: D209-669-043

D209-669-043

Parent Item Name: Replacement Skidtube

Start Date: 27/06/2012

Required Date: 11/07/2012

Start Qty: 1.00

Required Qty: 1.00

D2855

Manufactured No

230

Each

19.0000

2

2

D2855

Cap

**

2

(SP)

12/07/11

*

Location

Loc Qty

Loc Code

FP002

84952 ✓

19

65519

2

73347

14

75074

3

AN3-5A

Purchased

No

230

Each

808.0000

4

4

AN3-5A

Bolt

**

4

(SP)

12/07/11

Location

Loc Qty

Loc Code

ST350

808

115371

46

117423

124

119355

200

120187 ✓

432

121185

6

AN960JD10L

*

NAS1149D03321 ✓

Purchased

No

230

Each

0.0000

4

4

*AN960JD10I *

Washer

**

4

(SP)

12/07/11

121 011 ✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-27-12 1:29:14 PM

Page 3

Work Order ID: 86334

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

86334

D209-669-043

Start Date: 27/06/2012

Required Date: 11/07/2012

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130

Purchased

No

230

Each

1,998.000

44

44

AI S7-1032-130

Insert

**

44

SP

12/07/11

Location

Loc Qty

Loc Code

ST280

51

117717

27

118966

22

119775

2

ST282

1947

119530

73

120181

12

121444✓

1862

AN3C4A

Purchased

No

230

Each

4,780.000

44

44

AN3C4A

BOLT

**

44

SP

12/07/11

Location

Loc Qty

Loc Code

ST350

4780

120187

31

120521

28

120769

38

121205

675

121556

8

122151✓

4000

AN960C10L

* NAS1149C0332 R

Purchased

No

230

Each

21.0000

44

44

*AN960C10I *

washer

**

44

SP

12/07/11

Location

Loc Qty

Loc Code

ST

21

107534

21

June-27-12 1:29:15 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-27-12 1:29:15 PM

Page 4

Work Order ID: 86334

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

86334

D209-669-043

Start Date: 27/06/2012

Required Date: 11/07/2012

Start Qty: 1.00

Required Qty: 1.00

D2594-3

Manufactured No

230

Each

2,396.000

14

14

D2594-3

O-Ring, 205 Skidtube

**

14 (28) 12/07/11

Location

Loc Qty

Loc Code

FP001

2396

65518

41

79496

984

79573

50

79755 ✓

1321

D2594-1

Manufactured No

230

Each

699.0000

14

14

D2594-1

Plug, 205 Skidtube

**

14 (28) 12/07/11

Location

Loc Qty

Loc Code

FP001

84

73401

30

74442

6

79495

48

FP-A

615

73401

0

78590

205

84951 ✓

410

D3564-9

Manufactured No

230

Each

41.0000

1

1

D3564-9

Wearshoe

**

1 (28) 12/07/11

Location

Loc Qty

Loc Code

FG

4

76950

4

FP001

37

67590

4

69943

1

82255

7

84870 ✓

25

June-27-12 1:29:15 PM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-27-12 1:29:15 PM

Page 5

Work Order ID: 86334

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

86334

D209-669-043

Start Date: 27/06/2012

Required Date: 11/07/2012

Start Qty: 1.00

Required Qty: 1.00

D3564-11

Manufactured No

230

Each

39.0000

1

1

D3564-11

Wearshoe

**

1 2P 12/07/11

Location

Loc Qty

Loc Code

FG

5

77056

5

FP001

34

83910 ✓

22

84871

12

230

Each

61.0000

1

1

**

1 2P 12/07/11

D3564-5

Manufactured No

D3564-5

Wearshoe

Location

Loc Qty

Loc Code

FG

2

34806

2

FP001

59

77609

1

80343

1

82254

8

84869 ✓

25

85475

24

230

Each

94.0000

2

2

**

2 2P 12/07/11

D3566-1

Manufactured No

D3566-1

Gasket

Location

Loc Qty

Loc Code

FP

-32

FP002

126

68924

2

80919

2

81619

3

83898

15

84879 ✓

72

June-27-12 1:29:15 PM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-27-12 1:29:15 PM

Page 6

Work Order ID: 86334

Parent Item: D209-669-043

Parent Item Name: Replacement Skidtube

86334

D209-669-043

Start Date: 27/06/2012

Required Date: 11/07/2012

Start Qty: 1.00

Required Qty: 1.00

D3566-5

Manufactured No

230

Each

52.0000

1

1

D3566-5

Gasket

**

1 12/07/11

Location

Loc Qty

Loc Code

FP

10

82275

10

FP002

42

80374

3

82274

6

84881 ✓

33

June-27-12 1:29:15 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



QTY -041	QTY -043	Part Number	Description
X		D2906-041	SKIDTUBE ASSEMBLY
	X	D2906-043	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
22	19	D2579	CROSS BOLT SPACER
12	14	D2594-1	PLUG
12	14	D2594-3	O-RING
2	2	D2855	AFT CAP
1		D2926-1	WEB
	1	D2926-3	WEB
1	1	D3564-9	WEARSHOE (REPLACES D2577-1)
1	1	D3564-11	WEARSHOE (REPLACES D2577-3)
1	1	D3564-5	WEARSHOE (REPLACES D2577-5)
1		D3564-15	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1		D3566-15	GASKET
50	44	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or ALS4-1032-130	INSERT
50	44	AN3C4A	BOLT
4	4	AN3-5A	BOLT
50	44	AN960C10L	WASHER
4	4	AN960JD10L	WASHER

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) LENGTH OF D2500-1 EXTRUSION BEFORE BENDING = 190 INCHES.
- 3) INSERT D2926-1/3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291
- 4) ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 5) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 6) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 7) USE DART DRILL TEMPLATE DT2906-041T1 (D2906-041) OR DT2906-043T1 (D2906-043) TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION C-C AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/291.
- 8) WELDING TO BE DONE PER DART QSI 004.
- 9) FINISH:
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2926-1/3 WEB. POWDER COAT ASSEMBLY WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 10) INSERT D2594-1 PLUG CW D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (12 PLACES).
- 11) ALL DIMENSIONS ARE IN INCHES.

RELEASED

07.09.04

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER *MLJ 12/06/27*
NO. *06334*

B	UPDATE DRAWING FORMAT: RE-ORGANIZE; ADD STAINLESS STEEL WEARPLATES AND GASKETS CHANGE WEARPLATE HARDWARE TO SS; PG 1: ADD NOTE 10; PG 2 C7: REMOVE AFT Ø0.640 HOLE FROM -041; PG 3 C3: CORRECTED -043 CAP P/N; PG 3 D7: 38 PLACES WAS 44 PLACES;	CB	07.08.21
A	NEW ISSUE	CP	04.06.22
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>q</i>		
DRAWN	<i>CB</i>		
CHECKED	<i>PH</i>		
MFG. APPR.	<i>q</i>		
APPROVED	<i>q</i>		
DE APPR.	<i>q</i>		
DATE	07.08.21		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. B
DRAWING NO. D2906		SHEET 1 OF 3
TITLE AH-1 (209) SKIDTUBE ASSEMBLY		SCALE NTS
COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



3



A

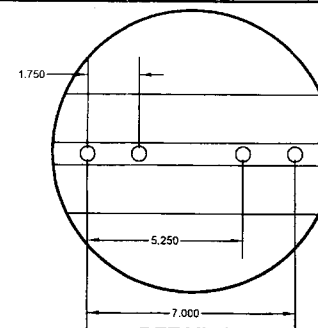
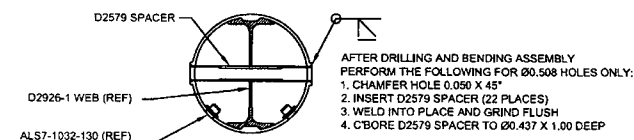


Diagram illustrating the rear view of the D2855 cap assembly. The diagram shows the cap with a central bolt and washer. The following components and dimensions are labeled:

- SEAL WITH SIKAFLEX-241/291
- Ø6.208
- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)
- AN3-5A BOLT (1)
- AN960JD10L WASHER (1)
- D2855 CAP
- 0.40

RELEASED
07.09.04



6

DESIGN	<i>Q</i>	DART AEROSPACE LTD	
DRAWN	<i>C.B.</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>PH</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>Q</i>	D2906	SHEET 2 OF 3
APPROVED	<i>Q</i>	TITLE	SCALE
DE APPR.	<i>Q</i>	AH-1 (209) SKIDTUBE ASSEMBLY	1:2
DATE	07.08.21	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

COPYRIGHT © 2004 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SEAL WITH SIKAFLEX-241/291

Ø208

DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)

AN3-SA BOLT (1)

AN950JD10L WASHER (1) (2 PLACES)

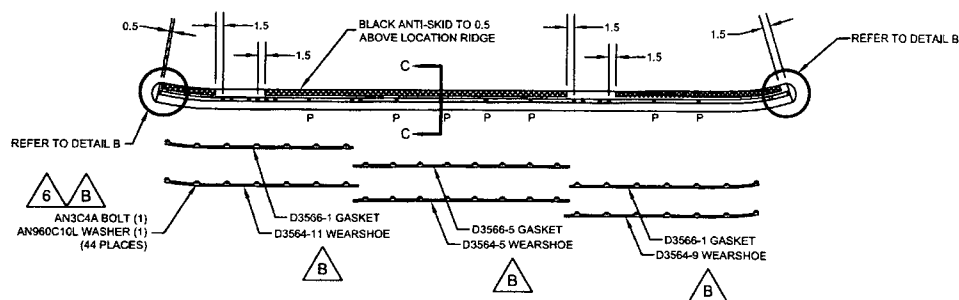
D2855 CAP

0.40

B

RELEASED

07.09.04



SECTION C-C
SCALE 1:4

D2579 SPACER

D2926-3 WEB (REF)

AL57-1032-130 (REF)
(TYP 44 PLACES)

AFTER PERFEC
1. CHA
2. INS
3. WE
4. C'B

6

**AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:**

- 1. CHAMFER HOLE 0.050 X 45°**
- 2. INSERT D2579 SPACER (22 PLACES)**
- 3. WELD INTO PLACE AND GRIND FLUSH**
- 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP**

DESIGN	<i>9</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2906 TITLE AH-1 (209) SKIDTUBE ASSEMBLY COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND NOT TO BE REPRODUCED OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION, DART AEROSPACE LTD.	REV. F
DRAWN	<i>C.B.</i>		SHEET 3 OF 3
CHECKED	<i>PH</i>		
MFG. APPR.	<i>21</i>		
APPROVED	<i>AD</i>		SCALE
DE APPR.	<i>TH</i>		1:2
DATE	07.08.21		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

86334

DRAWING NO. D2906	TITLE AH-1 (209) SKIDTUBE ASSEMBLY	REV. B	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2906-B-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN A.P.	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 12.05.28	DATE 12.05.28	DATE 12.05.31	DATE 12.05.31		DATE 12.05.31		

PURPOSE:

CHANGE ALL C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

WAS

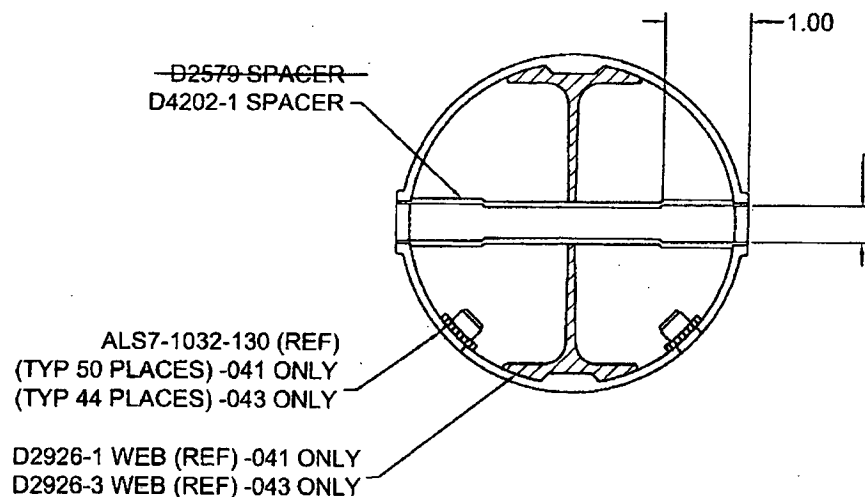
QTY -041	QTY -043	PART NUMBERS	DESCRIPTION
22	19	D2579	CROSS BOLT SPACER

IS

22	19	D4202-1	SPACER
----	----	---------	--------

SECTION C-C ON SHEETS 2 & 3 ARE AMENDED AS FOLLOWS FOR ALL HOLES THAT WERE ORIGINALLY C'BORED:

RELEASED
2012-06-05
[Signature]



SECTION C-C A2-2
NOT TO SCALE A2-3

AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

- ~~1. CHAMFER HOLE 0.050 X 45°~~
- ~~2. INSERT D2579 SPACER (20 PLACES)~~
- ~~3. WELD INTO PLACE AND GRIND FLUSH~~
- ~~4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP~~

1. INSERT D4202-1 SPACER, 22 PL (-041) OR 19 PL (-043)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries